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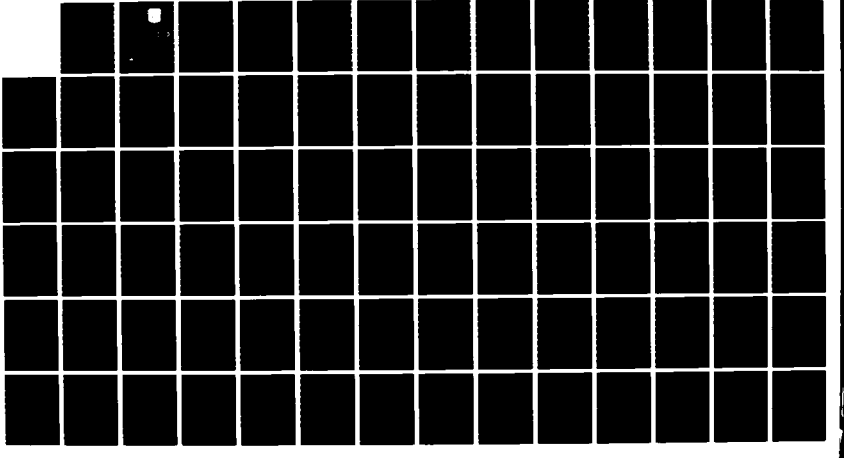

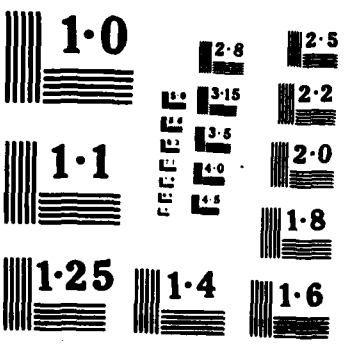
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STUDY PROJECT

MEDICAL CORPS PEACETIME ISSUES AFFECTING WARTIME READINESS

BY

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15 MAY 1986

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The Medical Corps faces a dual role of providing peacetime health care while simultaneously preparing itself to fulfill its wartime medical support mission. In the past, peacetime health care has taken priority over wartime medical readiness. This group study project addresses several issues dealing with the peacetime organization, training and utilization of the active duty Medical Corps to promote maximum wartime medical readiness. The study assumes that medical readiness takes priority over the peacetime health care mission.

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USAWC MILITARY STUDIES PROGRAM PAPER

MEDICAL CORPS PEACETIME ISSUES AFFECTING WARTIME READINESS

A GROUP STUDY

by

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PREFACE

This Group Study Project was produced under the aegis of the US Army War College Department of Command, Leadership and Management. The scope of the study was limited to issues affecting the active duty Medical Corps. It is recognized that this is a small, but not insignificant, part of the larger problem for the Army Medical Department (AMEDD) of how to improve wartime medical readiness while providing peacetime health care which is currently being addressed by many offices throughout the AMEDD. The six Medical Corps officers of the class of 1986 elected to participate in this study to share their knowledge, experiences and insights of the problem, to gain a deeper, more thorough understanding of the Medical Corps, and to make recommendations which may have an impact on the future of the AMEDD and the Medical Corps. The authors wish to express their sincere appreciation to the many offices throughout the AMEDD and DOD who so willingly and thoughtfully provided resources, data and suggestions on this study. The authors also wish to express their gratitude to Colonel Bob Sloane, Project Adviser, for his very helpful guidance and logical constructive oversight during the development and writing of this paper. We also express our thanks to our other AMEDD classmates in the class of 1986 who provided many thought-provoking comments on the topic.

LIST OF TABLES

MEDICAL CORPS PEACETIME ISSUES AFFECTING WARTIME READINESS

CHAPTER I

INTRODUCTION

Mission of the US Army Medical Department

A great deal of attention has recently been focused on the capabilities of the Department of Defense, (DOD), to care for casualties in a major war and on the quality of health care delivered by the Defense health care system in peacetime. Numerous actions have been initiated, or are planned at the DOD and Department of Army (DA) level to address these concerns and make corrections where necessary. A major review was completed in June 1985 by the Blue Ribbon Panel on Sizing DOD Medical Facilities. This panel focused on medical readiness and the relationship of military health delivery to civilian health care.

The Panel confirmed that the primary consideration in decisions affecting the military health services system must be the medical readiness needs of the Services and only secondary, to provide peacetime care. Medical readiness is defined as the capability to support the operating forces in conventional conflicts as specified in the Defense Guidance. Among its major components or determinants are: prepositioned medical units, rapidly deployable facilities, stockpiles of critical equipment, adequate evacuation capabilities, access to the nation's hospitals, trained manpower and effective plans for their mobilization, deployment and wartime operations. In short, medical readiness involves sufficient quantities of medical units and personnel

with the appropriate skill mix, equipped, trained and capable of mobilizing and deploying to support and sustain the force.

Study Purpose

The purpose of this group study project is to review and make recommendations regarding various strategies for modifying the structure, training and duties of the active duty component of the US Army Medical Corps to assure medical readiness for war while providing peacetime health care for active duty soldiers and other eligible beneficiaries. This study will review the active duty Medical Corps commitment to fill Active Forces (COMPO 1) Table of Organizations and Equipment Unit (TOE) and Table of Distribution and Allowances Unit (TDA) requirements as defined by the June 1985 Mobilization Personnel and Composition Systems (MOBPERSACS) compared to the Medical Corps FY 85 authorized end-strength. The study will further propose recommendations to allow the Medical Corps the maximum ability to meet the COMPO 1 requirements and to insure that each medical officer is ready to accomplish his or her wartime duties. The project will not address other problem medical readiness issues such as the staffing of reserve component units and the equipping of TOE medical units. It will, rather, concentrate only on the active duty Medical Corps and its ability to accomplish its portion of the wartime medical support mission. In addition, the study will discuss how the corps would be trained and used in peacetime to provide health care that supports the wartime medical readiness mission of the Army.

Both the DOD and DA are actively pursuing ways to improve overall wartime medical support, to include looking at reserve component

shortcomings. This study will attempt to cast light on many of those same issues for the active force, but with particular attention on their peacetime use. The most current strategies that address these issues come from the aforementioned Blue Ribbon Panel and the Army's Medical System Program Review. Finally, our project will review the potential changes affecting the peacetime function of the Army Medical Corps and peacetime health care system resulting from these two efforts with ideas from members of the group study project incorporated in the body of the paper.

Organization of Paper

The general organization of this paper is as follows:

a. Wartime staffing requirements of the Medical Corps.

b. Current authorized strengths and specialty mix to support those requirements and recommendations to solve the shortages and imbalances.

c. Acquisition and medical training of Medical Corps officers to achieve the required wartime specialty mix.

d. Individual Medical Corps officer wartime skills.

e. Restructure of the authorized Medical Corps strength in a restructuring of the peacetime Army health services system to support medical readiness including alternatives for modifying Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) and using other civilian health care resources.

f. A consolidated summary of recommendations.

The Problem.

The Army Medical Department (AMEDD) is charged with the responsibility to conserve the Army's fighting strength. It

accomplishes this mission in the following manner: promoting a healthy, vigorous and fit fighting force, and ensuring that the Army is supported by highly trained individuals, staffing well equipped medical units. It must also instill confidence in soldiers that they and their families will receive quality medical care. Although preparing for combat surgery tends to dominate thinking and planning for wartime care during peacetime, experience has shown that the most effective, least expensive way of providing the combat with maximum number of healthy soldiers is by emphasizing preventive medicine measures; therefore, specialists in other than surgery must also be available. Disease and noncombat injuries typically outnumber battle casualties three to one and combat stress casualties can comprise over 80% of casualties in the early phases of combat.

While the Army health care system is one of the nation's largest providers of peacetime health care, it must also be ever alert to make a rapid transition to wartime medical support. The wartime medical system must be a continuum from the combat medic on the front line all the way back to the medical facilities in the Continental United States (CONUS). The physician in the TDA hospital in CONUS is almost as important as the surgeon in the TOE hospital in the combat zone, since all are involved in this continuum. The system should be such that it can return to duty the maximum number of trained combat soldiers at the most forward echelon possible. Many of the skills needed to make the wartime system work are gained by Army health professionals as they provide care to the peacetime Army and family members.

Following the Vietnam war the peacetime environment changed drastically for Army medicine. The physician draft, which had been the

primary means of acquiring new physicians for the Army, was disbanded. The exodus of combat experienced doctors after the war and the lack of an effective recruitment campaign to bring new physicians into the DOD resulted in a grossly understaffed Medical Corps. Many of the 3800 officers left on active duty in the US Army, for example, were in specialty training programs at Army medical centers. Thus, they were not available to care for troops or staff TOE units. In addition, the number of beneficiaries eligible for care at military medical facilities continued to expand due to the growing number of retirees and their dependents and the increased number of married soldiers. This combination of events resulted in the AMEDD having to focus most of its attention on fulfilling its peacetime health care mission to the neglect of medical readiness.

With the advent of the Health Professions Scholarship Program (HPSP), the opening of the Uniformed Services University of the Health Sciences (USUHS), and the revamping the DOD physician incentive pay program, the downward trend in physician recruitment and morale was reversed in the late 1970's, but the increased number of physicians could barely keep up with peacetime health care demand.

For the past few years, due to a variety of reasons, readiness has assumed a secondary role in the operation of the AMEDD. Decisions made at the AMEDD senior level reflected the pressure to provide peacetime health care. However, this readiness issue was not unique to the AMEDD, since the rest of the Army also had to face its own decreased readiness posture in the aftermath of Vietnam. Throughout the Army, at the close of the 1970's, there was a new focus on readiness, modernization and mobilization preparedness. This renewed emphasis was enhanced by the

Reagan administration's policy decision to improve the conventional forces. When it became apparent that the military health services system could provide care for approximately only 20 - 30% of casualties in a NATO scenario, medical readiness became a highly visible and somewhat political issue. Today, the AMEDD has over 5300 Army physicians on active duty in a still overburdened health care system. It does, however find itself better able to concentrate on its primary mission of medical readiness. The problem now becomes how to structure, train and employ the Medical Corps in peacetime to support wartime medical readiness, while still providing effective peacetime care.

Study Parameters

This group study project will provide recommendations based on the report of the Blue Ribbon Panel, the ongoing Medical System Program Review (SPR), and interviews with individuals throughout the AMEDD, and within the Office of the Assistant Secretary of Defense for Health Affairs. The recommendations will be based on a series of conclusions, which represent a consensus of the group.

This study group project is based on the following assumptions and limitations:

a. This study pertains only to the active duty Medical Corps, and not other officer corps or enlisted personnel within the AMEDD.

b. Readiness to accomplish its wartime medical support mission is the primary mission of the Medical Corps, and that of providing a peacetime health care to DOD beneficiaries secondary; all decisions and recommendations will be based on how medical readiness to accomplish the wartime mission might be promoted.

c. The June 1985 MOBPERSACS, COMPO 1, defines the Medical Corps wartime active duty strength requirements.

d. As a result of the Army's active duty fixed endstrength of 781,000, the Medical Corps authorized endstrength will not exceed or deviate significantly from 5317.

e. The major recommendations of the Blue Ribbon Panel will become policy and will be implemented in some form. In particular, medical readiness will have precedence over peacetime health care to other than active duty soldiers, there will be increased reliance on civilian health care, and increased coordination and sharing will occur among military and other federal hospitals. The recommendations of the Blue Ribbon Panel are enclosed at appendix A.

f. Health care will continue to be made available to all DOD beneficiaries, through either the military health care system or by civilian providers.

CHAPTER II

PEACETIME PERSONNEL POLICIES

Wartime Medical Corps Size and Specialty Requirements

Of the medical readiness needs of the Services, the most important is for an active duty medical force adequate to meet wartime requirements, both in CONUS and the combat theater(s), during the period before the reserve component could be mobilized.

The size of the peacetime active Medical Corps should be a function of three readiness imperatives. First, there should be a size sufficient to provide the health care needs of the active duty Army, which can be termed force maintenance. Second, there is a need for the minimum essential force required to support the fighting force during the opening phases of a war, which is referred to as the mobilization, or M-day, force. Third, there is a requirement for a number of medical officers to accomplish certain wartime tasks within the United States, such as casualty receiving and providing care at remote locations.

Of these three categories generating force requirements, the M-day force is the largest component in a NATO type war, so, providing the M-day force requirement also meets the force maintenance requirement. The M-day force requirement is dependent on a number of variables, such as the number and types of casualties, theater evacuation policy, duration of the conflict and size of the fighting force. Given the change in doctrine and weapons since the last war between big powers, this new lethality of the battlefield makes casualty estimates very uncertain.

To a certain extent the theater evacuation policy can be adjusted to handle misjudgments in casualty rates, (i.e., higher than expected casualties can be more rapidly evacuated and treated in CONUS facilities). Nevertheless, there must be sufficient quantities of operating rooms, surgeons and recovery/intensive care beds to handle practically all of the most pessimistic wounded in-action casualty estimates and to care for these patients for at least 3 to 4 days during their initial stabilization and recovery prior to further evacuation out of theater. The theater evacuation policy has no effect on this baseline combat theater medical force requirement. In addition to size, the other important factors contributing to readiness are medical proficiency, military proficiency, specialty mix, and force availability.

Medical proficiency is, after size, the basis for all medical readiness, for without it lesser factors are no longer important. It is said that the mission of the field artilleryman is to move, shoot and communicate. Similarly, the mission of the Medical Corps is to move, treat and communicate. The artilleryman becomes proficient at shooting by education, training and practice during peacetime. The technical competence gained in peacetime is directly transferable to combat. For the physician there is no exact peacetime training that is directly transferable to combat because the diseases and injuries of war differ somewhat from those seen in peacetime. There is, however, training that will approximate the requirements of combat medicine: such training is received in the process of becoming a board-certified physician and then in applying those skills learned by treating patients with a variety of pathologic conditions. The general surgeon is best prepared to perform

his or her role in combat by the broad clinical practice of surgery, the internist by the broad clinical practice of medicine, etc. The expertise is not identical but is as close as is possible, and must be maintained for continued proficiency.

In order to analyze the readiness factors of size and specialties, several sets of data have been used. Data are usually shown by Specialty Skill Identifier (SSI) shown in Enclosure 1. There are 43 specialties. The first set of data is the MOBPERSACS, shown at Enclosure 2. The peacetime requirements and authorizations, peacetime manpower goals, and present deployment data are shown at Enclosure 3.

As previously mentioned, the authorized endstrength for the Medical Corps is 5317. Of that number, a substantial portion is in specialty training programs or Graduate Medical Education (GME). For the purpose of this analysis, the number of 1598 in specialty training is used, leaving a peacetime staff level of 3719.

The MOBPERSACS shows a requirement for 2039 physicians in TOE units and 7135 in TDA units, for a total of 9174 physicians. There is, therefore, an enormous physician shortage of 5455 physicians (9,174 requirement minus 3,719 staff). Furthermore, if we take the MOBPERSACS individual specialty requirements of greater than 300 physicians (Table 1), the top four (60E, 61F, 61J, 61M) have a requirement of 4,449 which is in excess of the entire peacetime staff level of 3719.

SSI	Speciality	Total Required
60E	General Medicine	1436
61F	Internal Medicine	1154
61J	General Surgery	1066
61M	Orthopaedic Surgery	793
62A	Emergency Medicine	443
60A	Operational Medicine	417
60W	Psychiatry	385
61R	Radiology	370
60N	Anesthesiology	319
61U	Pathology	307

Table 1. SSI's Requiring Greater than 300 Physicians (Total TOE and TDA) in the MOBPERSACS

With these deficits, it seems meaningless to analyze the specialty mix of the total MOBPERSACS requirement. There are no personnel actions that can be taken, short of an increase in the endstrength to significantly affect these shortages. Instead, a more realistic evaluation will compare data for possible alternatives to the current peacetime distribution. The first comparison, shown in Enclosure 4, is to show the SSI's for which there is a difference between the peacetime staff goal and only the TOE requirements. In short, if there is a mobilization and all of the Army physicians not in training were assigned to TOE units, Enclosure 4 shows which SSI's would still have a shortage. Those SSI's are listed in Table 2.

SSI	Specialty	Short-fall
60A	Operational Medicine	74
61J	General Surgery	184
61K	Thoracic Surgery	6
61Z	Neurosurgery	3
62A	Emergency Medicine	184

Table 2. SSI's for Which There are Insufficient Positions in the Peacetime Staff (Short-falls) to Meet Just the MOBPERSACS TOE Requirements

The second comparison for the surgical specialties only, is to determine the difference for the total MOBPERSACS requirement compared to peacetime goals, also shown in Enclosure 4. Those SSI's are listed in Table 3.

SSI	Specialty	Excess/Short-fall
60J	Obstretician-Gynecologist	41
60M	Urology	103
60N	Anesthesiology	218
60S	Ophthalmology	91
60T	Otolaryngology	115
60J	General Surgery	874
61K	Thoracic Surgery	94
61L	Plastic Surgery	42
61M	Orthopaedic Surgery	637
61W	Peripheral Vascular Surgery	10
62Z	Neurosurgery	79

Table 3. Comparison of Peacetime Staff Positions for Surgical Specialties Against the Total MOBPERSACS Requirements

There are several full or partial solutions to the shortages in physician specialty mix. They involve either increasing manpower beyond the present authorized endstrength of 5317 or changing specialty distribution within the restrictions of a 5317 endstrength. Since a basic assumption of this paper is that endstrength will remain near to 5317, only the second solution is examined here.

Before discussing alternative ways of addressing the shortages within the resources allowed, it may be beneficial to discuss some basic concepts of medical care in combat. For it is on these basic concepts that medical readiness is founded, so to understand them is vital.

The concept that medical care is a continuum from the Forward Line of Troops (FLOT) to CONUS is critical to medical support in combat and

to medical preparedness. To meet the mission of returning the maximum number of soldiers to duty, and minimizing mortality and morbidity, this concept of continuum is essential, because of the necessity for all levels of care.

The concept is complex and two examples will be used to illustrate it. Consider two soldiers who are wounded. One receives an abdominal wound with perforation of the large intestine but no injury to major blood vessels while the other soldier has a compound fracture of both bones of the lower leg. The first individual will require minimum first aid but then will need a major surgical procedure as soon as possible. The second soldier will need expert first aid immediately in order to prevent further, more serious injury. After such aid is rendered there will be some preparatory orthopaedic surgery to make him stable for transport but definitive surgery may be delayed until after evacuation to a CONUS hospital. In both cases, surgeons are needed in the combat zone and in CONUS in order to give the best care possible.

In both examples, the treatment encompasses a series of technical procedures by different specialists from injury to recovery. The result of the care--the state of recovery--is dependent on the availability, skill, and coordinated efforts of the physicians and others. A deficiency in the system at any point can directly affect the recovery and the chances of return to duty. In addition to the medical/psychological aspects, it is well known, for both administrative reasons and human nature, the farther from the FLOT the soldier is removed, the less will be the chance of ever returning to duty.

In considering alternatives, there are four possible partial solutions within the restriction of a 5317 endstrength:

(1) substitutability, (2) deletion of selected specialities, (3) early deployment of physicians in training, and (4) elimination or reduction of residency programs.

1. Substitution. The concept of substitutability involves using a physician trained in one specialty in a different, but similar specialty. This has considerable merit because it allows continuing peacetime care that is not required in combat. For example, pediatricians might substitute for internists and are often especially qualified in infectious diseases. They have skills that can be fully utilized in peace and war. The shortage in 60A, Operational Medicine, could be made up from any specialty and the shortage of 62A, Emergency Medicine, could be made up by 61H, Family Practice.

Other physician substitutions could be made with certain provisions. For example, 60J, Gynecologists, could function as 61J, General Surgeons, under supervision.

Other substitutions would require further training. For example, 60F, Pulmonary physicians, could function as 60M, Anesthesiologists with three additional months of training.

2. Deletion of Selected Specialties. Deletion of certain specialties would allow an increase in combat-essential specialties which have shortages. The most likely specialty for deletion would be pediatrics. As can be seen in Enclosure 4, there is a peacetime excess of 263 pediatricians compared to the MOBPERSACS requirement. Pediatric care could be contracted out in some areas; however, there are authorized positions for 52 pediatricians overseas where contracting might be difficult or impossible, and there are some posts in the US

such as Fort Irwin where there are few or no civilian physicians available. Also, it is questionable that pediatricians could be contracted to maintain the newborn intensive care units in the medical centers which are necessary for GME programs. With 52 Out of Continental United States (OCONUS) positions, a larger number of active duty positions in CONUS would have to be available for rotations. Thus this option, though feasible, is probably not acceptable as long as the Army maintains a commitment to the Army family.

3. Early Deployment of Physicians in Training. In war, physicians in specialty training can be deployed in that specialty after having completed half of their training. The partially trained resident can then work under supervision much as discussed above in substitutability. If the resident is close to completing the training, it may be possible that he or she can work alone.

This, of course, is an immediate source of physicians but has the disadvantage of weakening the CONUS base for the continuum of medical care. For example, if all the staff surgeons and most of the staff orthopaedic surgeons are deployed to TOE units, there will be a shortage in the TDA hospitals. In the two examples of the soldiers, recovery, and possibly return to duty, were dependent on stateside care, which could occur as early as one week after the onset of hostilities.

Interns, or physicians in the first year of graduate medical education (FYGME), cannot be deployed until the completion of that year. At the end of the intern year, they can be deployed as 60E, General Medical Officers (GMO).

4. Elimination or Reduction of Residency Programs. As noted earlier, an assumption of 1598 physicians in training is made. The

number of authorized positions in combat-related specialties cann be increased by eliminating part or all of those training programs. For example, in the four pediatric specialties, there are 98 authorized training positions which could be used for surgeons, etc. The advantage of reducing the number of training slots, then would be two-fold: those positions could be used to increase the authorized number of physicians in the critical specialities, and the total peacetime care would be increased. The latter is based on the premise that a staff physician manages three times as many patients as a physician in training. However, there are many advantages to maintaining the training programs as an investment for retention, etc.

Recommendations

1. That all mobilization TOE requirement positions be filled by active duty physicians.

2. That the first priority for filling those positions be from the peacetime staff positions by the same SSI; except that one 61J, Staff General Surgeon, be kept at each medical center with general surgery residents.

3. That the second priority for filling those positions be from the peacetime staff positions of other SSI's using substitution.

4. That no residents be deployed before completing their training.

5. That the consultants to the Surgeon General for 61J, General Surgery; 61K, Thoracic Surgery; and 61Z, Neurosurgery, restudy and determine the maximum number of positions that can be properly utilized in peacetime, and that the peacetime positions be so adjusted.

Graduate Medical Education

Secretary of Defense Caspar Weinberger recently stated that he saw no need

> to perpetuate any system that produces an oversupply of physicians whose specialties are not relevant for our fighting forces in their time of greatest need.

In contrast, the Department of Defense Blue Ribbon Panel on sizing DOD medical facilities stated that the military health services system has a dual mission of being ready to provide medical support in the event of war and

> to provide a health benefit to the dependents of the active force as well as retirees, their dependents, and survivors as an incentive for continued service.

On Army wide surveys, soldiers list medical care second only to retirement benefits as an incentive to stay on active duty. If the Army is to meet these two missions, all specialties become relevant for the fighting force. However, Julian Barber, Special Assistant to the Assistant Secretary of Defense for Health Affairs, stated that a request for a single civilian health care organization to provide supplemental care to DOD beneficiaries will go forward in March 1986. A proposed contract may be awarded in 1987. Health care obtained in the civilian community may therefore become part of carrying on these dual missions.

Today, of the 5317 physicians on active duty, 1691 (32%) are in graduate medical education (GME) programs. This includes 363 medical interns, 1082 residents, and 246 fellows. The question is, should GME programs continue as a viable part of the Army Medical Department, and if so, should they remain the same or be significantly modified? Should the Army change its training programs to emphasize those specialties needed for combat? Should, or could, the Army use civilian training

programs instead off its own? Should the Army train, or retain, a variety of subspecialists, such as pediatric oncologists that have little or no obvious combat role?

The active army does not have adequate numbers of physicians in wartime specialties such as general surgery, neurosurgery, orthopedics, anesthesiology, and thoracic surgery. The numbers lacking in those specialties for peacetime service, however, is relatively small, or even absent. During war, especially early in a war, the need for surgeons is obviously great. The history of war has also proven that two-thirds of casualties are due to disease, so the need for nonsurgical physicians may become critical. Intense psychiatric support will be needed in all phases of conflict.

During peacetime there is a minimal need for trauma specialists, thus a utilization problem will arise if the Army significantly increases its number of trauma surgeons. With mobilization there will be a marked increase in the need for all surgical specialties in TOE and TDA units. Less these 200 general surgeons (and approximately 160 orthopedic surgeons) are needed to fulfill all the peacetime positions based upon a 5,317 physician limitation. During war, thousands of both kinds of surgeons will be needed. Other trauma oriented specialists are also faced with this peacetime/wartime dilemma. Does the Army in peacetime eliminate or reduce nonsurgical specialists so that it can have the number of surgeons it anticipates needing in war? The US Navy, in an attempt to increase its number of general surgeons, finds itself in the position of having more surgeons then it can use during peacetime. By 1989 the Navy is projected to have 60 more general surgeons than there are positions or real needs. These specialists will

probably practice in areas other than the surgical field, with a waste of 240 man years of training. This error will certainly guarantee poor morale, loss of surgical skills for the surgeons, and is a disincentive for physicians to be attracted to continued service. It is certainly neither efficient nor wise to use physicians in areas other than their expertise during peacetime.

If the Army acquires the number of surgeons it needs in peacetime for the first 60 days of war, there will either be too little for the surgeons to do, or there will have to be a change in the AMEDD peacetime mission or structure. More surgeons will require a larger referral base, more nonsurgical specialists, more nurses, and more ancillary personnel. The current limitation of 5317 physicians with its designated specialty mix based upon peacetime requirements, dictates a limitation of all health care professionals. If the Department of Defense wants the Army to have the quantity of surgeons and other physicians it will need at the beginning of a war to fill all TOE and TDA units, it only follows that there must be a major increase in the number of all health care personnel.

Many specialties, especially the surgical specialties and subspecialties, are limited by civilian review bodies to a specified number of trainees per year. This limitation is based upon surgical case mix and the number of cases available in a specialty. Because of an excess number of surgeons in the civilian sector, the civilian accreditation organizations will not permit the expansion of any civilian or military surgical programs, nor will they allow any new programs to start. This GME limitation immediately blocks any effort by the Army to increase its surgical specialists through its own graduate

medical education. If there is a continued limitation of the numbers of active duty medical officers, alternate mechanisms must be developed to acquire these specialists for wartime deployment. It is also essential that the Army maintain at least the current number of residents in its own or civilian surgical training programs, so that a continuous and dependable flow of active duty surgeons is maintained.

Medical education is complex and requires multiple disciplines to train a single specialty. Surgeons alone do not train surgeons, and pediatricians alone do not train pediatricians, and within and across each specialty, numerous subspecialists are needed and required. The Residency Review Council (RRC) of the American Medical Association monitors GME programs for accreditation and makes recommendations for program approval. Orthopedic residency programs, for example, require pediatric, neurosurgical and many other categories of patients. Obviously, pediatricians and neurosurgeons are then required to care for these patients. The complexities and interdependency of training programs are vast. The RRC also provides guidance as to the number of fully trained and specialty board certified staff that are needed for each physician in training. For instance, both ophthalmology and pediatric training programs require four different subspecialists on the staff before the program is approved by the RRC. Not all of these specialists or subspecialists need to be primarily in the training center, but they must be immediately available. The availability of the subspecialists may dictate the location of the training program, and it obviously dictates the staffing. The RRC requirements are intended to insure that qualified physicians, with extensive experience and subspecialty exposure are graduated from residency programs.

It is evident therefore that if the Army intends to continue to train such trauma oriented specialists such as general surgeons, orthopedic surgeons and anesthesiologists, there will be a continued need for nonsurgical specialties such as pediatrics, internal medicine, and nuclear medicine. Since nonsurgical specialists are required for training, to provide peacetime care to numerous categories of DOD beneficiaries, and for substitutability or a TDA role in wartime, the Army must continue to have a full spectrum of physicians.

If the number of non-GME Army physicians is to be increased, in a time of fixed endstrength, several possibilities exist within the GME. First, to increase the number of obligated years for time in training would have an immediate impact upon the number of physicians on active duty. Currently, there is a requirement to serve a minimum of two years on active duty following GME. Recently, a proposal has been made to require a year for year obligation for continuous GME, and the obligation for FYGME to be at the discretion of the respective service secretary. Pre-existing obligations could be paid back concurrently, but the minimum term of service must equal the time in GME. Because surgical residencies are usually longer than nonsurgical residencies, this proposal will penalize the surgical specialties, and may discourage applications for these residencies. Enactment of this recommendation may also indicate to applicants that residency training directly from internship is encouraged because GME and other obligations can be served concurrently after GME. Field applicants (physicians currently in staff positions, usually as general medical officers) have historically had

high retention rates, and it is this group that will suffer the greatest.

Second, closing some GME programs may be effective. GME programs, because of the training mission and requirements of the RRC, are usually staffed at maximum authorization, and sometimes, for a variety of reasons, have an excess number of staff. Eighty-five percent of Army trainees and 31% of staff physicians are located at the eight medical centers. The workload of these facilities account for 43% of occupied bed days and approximately 35% - 40% of AMEDD workload. In the absence of residents, the remaining staff, representing now only 21% of the total physician strength, would end up caring for 35% - 45% of the patients. Compounding this is the multi-specialty, high-intensity, care characteristic of a tertiary care system. Obviously the tertiary health care system could not meet its mission without additional staffing. But, since the staff would be more experienced and efficient than trainees and would not have a teaching responsibility, fewer additional physicians would be required then the numbers of residents lost.

Some medical specialties such as internal medicine are projected to be overstrength in several years, and reducing the training output by program closure would be an effective mechanism to increase staff slots. Pathology has had a shortage of qualified applicants in the last several years and a sufficient number of staff physicians, so eliminating one or more pathology programs seems reasonable. Also, based upon a minimum critical mass of residents required for each program and the number of subspecialists to support each program, elimination of a few other training programs is also feasible. Physicians in certain specialties

such as internal medicine and pediatrics are more easily recruited from the civilian sector than those in surgical specialties. Training could therefore be reduced in those areas where recruitment is successful. It must be remembered that recruiting is always easier during peacetime and becomes increasingly difficult when hostilities are present or are imminent. Peacetime recruitment should never be equated to wartime recruitment.

Closure of a medical center, proposed by the Department of Defense, would eliminate several training programs and thereby free up many staff and training positions. Elimination of training programs or positions may, however, have several adverse effects. Once eliminated, programs are difficult to reinstitute because of the concurrence of the numerous governing bodies that is required for approval. Several years of study are usually necessary before a new program is accredited, eliminating any possibility of the Army rapidly reestablishing a deleted program. A teaching program, or part of a teaching program, cannot be merely moved to another location since that is considered starting a new program. Increasing the size of a specialty training program, at least in surgical specialties, also requires approval. Additionally, although confirmatory data is not available, there is a perception that training programs are powerful retention tools, not only for the physicians trained, but also for the teaching staff. In surveys of HPSP students, 80% cite GME as the reason for selecting the Army over other HPSP programs. Elimination of all GME may therefore adversely effect this important input into the AMEDD, however, consideration can still be given to decreasing the size of GME, perhaps even by closing a medical center.

Could the Army disband all of its GME programs, and have residents redistributed among civilian programs, but maintain some control of the positions in the civilian sector? At the present time the Army has 79 trainees in civilian institutions in sponsored positions, i.e., on active duty. Obligation for civilian sponsored training is year for year in addition to any pre-existing obligation. Therefore, the program has limited appeal to those applying for long residencies. Army sponsored individuals in civilian residencies count against Medical Corps endstrength and the constraints related to GME size apply. Therefore, the Medical Corps would have to rely on either recruiting fully-trained volunteers or deferring active duty for those obligated (from HPSP or ROTC) until completion of their specialty training. Approval for such deferral would depend on the specialty chosen and acceptance by an eligible program. Since GME training has stringent accreditation requirements, there is no indication that the civilian community could increase the number of training programs or positions to absorb all the physicians that the military needs. The military would certainly lose effective control of those training positions, and there could be no guarantee that the civilian community would continue to honor any agreement to train a certain number of military physicians, especially if there was an emphasis on military requirements. Further, the health care which is a by-product of GME in the civilian hospitals would be lost to the US Army.

Tertiary care centers (Medical Centers) are excellent locations for the active duty physician to gain or improve professional skills. In the current atmosphere of quality assurance, credentialling, and litigation, civilian medical centers may become more and more reluctant

to allow active duty physicians to receive short term training, learn new skills, or improve old ones. Army Medical Centers are thus ideal for this continuing educational need. Periodic rotation of physicians between medical centers and community hospitals would be one mechanism to solve this educational requirement. However, the yearly unpredictability of individual retention, personal and military needs, the limited number of many specialists and subspecialists, and the destructive morale aspects of this solution make it potentially prohibitive. Therefore, the Army Medical Centers become a major source for continuing medical education, through selected assignments, short courses, conferences, and temporary duty.

To increase the retention of physicians by "training our own" is often used as a justification for continuing GME. Because Army data has never been collected, it is difficult to prove that Army residency training is an effective retention technique. The Air Force has some data to suggest that the retention rate is four times greater for the physicians trained in the Air Force compared to physicians trained in the civilian community. Anecdotal reports indicate that the majority of those physicians who remain as careerists, were trained by the military. Being trained in a military facility does increase bonding and familiarity, two assets that are important in any military organization.

To be sure that all military physicians have basic skills in medicine and surgery, the intern year must be carefully designed. Certain specialties allow their FYGME to be generally limited to the specialty in which the physician will continue in GME (categorical internship). Specialties such as surgery and internal medicine offer

this opportunity, but are entirely clinically oriented. FYGME in specialties such as pathology and radiology do not provide training in the medical and surgical skills of a general medical officer. All military physicians need a basic knowledge in medicine and surgery and should have a clinical background that could be expanded if needed. To offer only clinical internships is important to the Army mission. There could be some difficulty with stopping categorical internships because the RRC could limit the number of transitional residencies (rotating internship).

It has been recommended that most physicians be assigned to TOE and TDA units as general medical officers following PGY1. However, there are not enough GMO positions to accommodate all finishing interns. Additionally, since two-thirds of interns go directly into residency after the best qualified field applicants are selected, there would be gaps in training programs, and the RRC discourages any break in continuous programs. Therefore, forcing all finishing interns into GMO roles does not seem desirable.

The US Army does not have enough, nor can it train enough trauma physicians needed for the first sixty days of war. Only one solution exists that could insure enough health care providers for the military at the start of war: expanding the active AMEDD to allow the immediate filling of TOE and TDA units. If the peacetime force is to remain constrained, alternate means must be found for the rapid introduction of physicians into the active forces during conflict. Use of reserve component medical personnel particularly from the Individual Ready Reserve (IRR) and Individual Mobilization Augmentee (IMA), is a potential solution to fill some TOE units and the majority of TDA

positions. Clearly, the reserve personnel would have to be immediately available. As noted earlier, increasing the obligation for post-graduate training would increase the number of physicians in the active force, but would not provide the number of physicians needed for mobilization.

Another mechanism that might insure a continuous flow of physicians but would not jeopardize the physician endstrength constraint would be to allow physicians from the HPSP and Reserve Officer Training Corps (ROTC), to compete for GME positions in the civilian community and then be brought on active duty after completion of training in a deferred status. The time of entrance on active duty could be determined by the Army. Alternately, the deferred physician, could with a change in current law, be assigned as an IMA, an IRR, or be assigned to a reserve unit and thus available for mobilization. Allowing reserve, IRR and IMA assignments by those obligated would provide some guarantee of well trained physicians with military exposure, and would minimize the problem of too many obligated physicians on active duty subject to selective retention criteria. Offering a stipend to physicians already accepted into civilian training programs with the provision that upon completion of training the physician would report for active duty or be assigned to a reserve unit is also a mechanism of increasing our mobilization strength. Furthermore, this mechanism could allow a decrease in the size of US Army GME.

The Veteran's Administration (VA) represents a large source of physician manpower who are already in a federal system. These physicians are not obligated to perform any federal service. This pool of manpower could certainly be used by the military, if a change in law

were to be enacted. If all graduates of VA GME programs were required to serve several years in the reserve forces, a major void in the readiness of military health care would be eliminated. Preregistration of all health care professionals has been proposed as a way to help solve the health care mobilization shortage and perhaps this should be done. However, the VA system is already a federal system, the physicians are on a federal payroll, and are therefore already "preregistered." Using VA physicians would reduce the tremendous cost that the other solutions would require. Stipends, deferral of HPSP, ROTC and USUHS students, or requiring reserve duty instead of active duty will be expensive, and is not budgeted. The Veteran's Administration is a federal source, with the cost of training already paid. This solution would avoid the political issues of registering civilians by occupation, although it would do so by place of employment.

Conclusions

1. The Army does not have enough active duty physicians to fill all of its TOE and TDA positions in time of mobilization.

2. In its current structure in peacetime, the Army cannot utilize the number of surgeons and trauma oriented physicians it needs for war.

3. The Army GME system cannot, under its present structure, provide the number of primary combat MOS physicians needed for mobilization.

Recommendations

1. To guarantee a steady flow of fully trained physicians into the Army, retain most but not all GME programs in the Army because of their importance for continuing education, professional growth.

2. Reduce noncombat SSI oriented GME training in some specialties that are projected to be overstrength or where adequate recruitment from

the civilian sector is possible, which will increase the number of staff physicians available for assignment.

3. Increase the obligatory service for GME trainees from a maximum of two years to a year for year. This change will automatically increase the number of years obligated for all physicians,, but will proportionally increase the number of obligated years for surgeons since surgical training time is longer. This proposal will eventually require selective retention of physicians because of end-strength problems.

4. Place more physicians into an active duty deferral plan so that GME can be accomplished in a civilian institution. Following GME the physician could be entered on active duty immediately, at a later date, or into the reserves.

5. Offer stipends to certain residents in civilian programs with the provision that upon completion of specialty training they enter active duty or the reserves. This recommendation would not be used if recommendation #8 were implemented.

6. Continue to encourage, but not require field assignments following internships, and give preference for consideration for GME to those from field assignments.

7. Allow HPSP, and ROTC students to go into the IRR or active reserves or become an IMA upon completion of specialty training. This recommendation will not be required if recommendation #11 is implemented.

8. Require all graduates of VA GME programs to serve in the Reserve Units, as IMA or IRR.

Readiness Training.

Based on current world-wide scenarios, casualty estimates and a medical force mix with almost 70% of medical TOE units in the reserve components, the active duty TOE unit medical force is sized at 23 hospitals. It consists of 16 hospitals in FORSCOM, (4 Mobile Army Surgical Hospitals [MASH], 4 combat support, 6 evacuation hospitals and 2 field hospitals), 9 hospitals in US Army Europe (USAREUR) and 2 TOE hospitals in Korea. Medical Corps staff positions for these TOE hospitals totals 566. Additional TOE physician spaces are in combat units, medical battalions, and command and control units. These additional 1473 M-day positions, plus TOE hospital spaces totals 2039 Medical Corps TOE authorized positions. Most of these TOE authorized positions are not filled in peacetime, so that additional physicians can be trained in GME or assigned to TDA hospital duties. The total physician wartime requirement from the active component including TDA requirements and specialty mix has been discussed earlier.

Preparing soldiers in peacetime to be highly competent to accomplish their wartime duties is no small task. Indeed, each of the Services spends billions of dollars in readiness related training. The Army's National Training Center at Fort Irwin, California is devoted entirely to realistic simulated combat training yet it necessarily falls short of the experience of real war. For Medical Corps officers the opportunity to practice their professional specialty in a military hospital in peacetime probably provides the majority of the training to enable them to be medically ready for wartime duty. Thus, providing peacetime health care to the variety of patients treated in military hospitals is a large part of a medical officer's continuing readiness training. But, there are other aspects of preparing medical officers to perform their

wartime duties competently. The problem the AMEDD faces today is how to transform a Medical Corps, composed largely of physicians in Army uniforms, into competent military medical officers, ready for war.

A military physician has the responsibility of being both an effective officer and a competent physician. The military and medical professions are widely acknowledged to be among the most demanding, and the development of the necessary qualities and skills to excell in each represents a unique challenge. The practice of military medicine is to an extent distinct and different from practice within any specialty of civilian medicine. The practice of military medicine, particularly in a combat environment, can be divided into four components: common sick-call illnesses and injuries, preventive medicine/public health, combat surgery, and combat psychiatry. No single medical officer can be expected to be a specialist in all these areas, but every medical officer should have some level of skill and knowledge in each. This level of capability should be acquired in the officer basic course which should be completed in residence by all medical officers prior to beginning internship, or in the case of civilian trained physicians, prior to reporting to their first assignment.

The AMEDD Officer Advanced Course emphasizes health care administration for the military physician and reinforces the military occupational medical skills of preventive medicine, emergency pre-hospital care, infectious disease and psychiatry. All career military physicians, which can be defined as those officers who will complete a military residency, should attend the Officer Advanced Course in residence as soon as possible after completing specialty board certification requirements or sooner if the opportunity presents. In

addition, physicians filling battalion and brigade surgeon positions should have a special course of approximately two weeks to refresh their field medical skills, review doctrine and generally prepare for their duties. Division surgeons, at least, should attend courses in care of nuclear casualties and in chemical, biological, radiation warfare.

The development of military physicians has progressed significantly with the opening of USUHS. Its Department of Military Medicine has developed an outstanding and unique military medicine curriculum which well prepares graduates for service in a combat medical environment. The material presented these medical students should be the foundation of skills knowledge and experience for all medical officers and the point from which more advanced training can be developed. These course subjects are found at appendix B. The foregoing constitutes the framework of a training strategy for medical officers through the rank of Major. This step would not replace the tri-service Combat Casualty Care Course.

We can now look at a utilization strategy, for Medical Corps officers. The primary prerequisite for the military physician is to have a high degree of professional competence in the practice of medicine. This can only be gained and maintained in peacetime, in a setting of continued practice in a high quality health care system. The transition from peacetime health care to combat medical care will never be easy, but the adjustment difficulties will be minimized if medical officers are familiar with their combat medical unit and the staff with whom they will be working. They should also have some exposure to the field environment and know how to provide medical care in a variety of field settings.

Since the specific readiness of the Army's TOE hospitals is a primary objective, policies to enhance their staffing and training must have high priority. All active component TOE hospitals should be stationed at an Army installation that offers frequent opportunities for supporting actual field training of an active component brigade-size combat unit. In CONUS this would necessitate relocating the following units: 85th Evacuation Hospital, Fort Lee; 46th Combat Support Hospital, Fort Devens; 15th Evacuation Hospital, Fort Belvoir; and 10th MASH, Fort Meade. Forts Carson, Polk, Stewart, Bliss and Drum (near future) currently have no TOE hospitals assigned but offer frequent field training of large combat units. Also, having TOE hospitals at these installations would allow battalion level medical units located there the opportunity to more fully exercise the chain of evacuation. The 41st CSH at Fort Sam Houston should remain there to provide training for Academy of Health Sciences students.

Medical staffing for CONUS TOE hospitals is currently done by designating medical officers with appropriate specialty skills against a specific TOE authorization line. This is known as the Professional Filler System (PROFIS) and is ostensibly reviewed quarterly. However, few medical officers ever have actual field medical training with the hospital and other staff. This should be remedied by assigning medical officers directly to TOE hospitals, with duty station at the installation MEDDAC/MEDCEN to the extent that the MEDDAC/MEDCEN has the workload to support the medical officer in his or her specialty. Other regional MEDDAC's would fill the remainder of the TOE authorizations. For instance, the 5th MASH at Fort Bragg requires 8 61J General

Surgeons; Fort Bragg MEDDAC workload supports 6 General Surgeons, so the remaining 2 General Surgeons could come from the Fort Lee MEDDAC. Surgeons would be assigned to the 5th MASH with duty station at Ft Bragg or Ft Lee. The rating chain would include the Medical Corps commander designee of the TOE hospital. The commander designee should also come from the colocated MEDDAC and during the rating process should specifically comment on the medical officer's readiness to assume his wartime duties. Having Medical Corps officers assigned to a TOE hospital allows a closer identification between physicians and other staff. Also, it validates the TOE hospital requirement to take some of its assigned professional staff to the field everytime it supports combat unit field training. All medical officers should expect to serve with their TOE hospitals in a field situation at least quarterly, which will total approximately two weeks annually. This gives the physician a greater incentive to insure that unit equipment is on hand, and properly maintained, and that unit enlisted personnel are properly trained.

This system will require the MEDDAC to make rapid adjustments during mobilization since a substantial number of its medical staff will deploy with the TOE hospital. Reserve physicians must arrive early to replace deploying physicians or the hospital workload must be curtailed or both.

The installation MEDDAC needs to provide training opportunities with patients for the TOE hospital. For physicians this could involve having a field hospital operating room set up for the MEDDAC to accomplish its minor surgery and a field hospital ward set up to provide minimal care for active duty soldiers placed on quarters. Also, an important priority for the Medical Corps is to train enlisted medics in their

clinical skills and to insure the proper training of all soldiers in first aid/buddy aid skills.

Recently more physicians have been assigned to command positions in AMEDD TOE units and this is appropriate. However, there are almost no physicians serving in staff planning and operations positions at the 04 and 05 grade levels. Opportunity exists for physicians to serve in the Office of the Surgeon General, Health Care Operations, JCS, Unified Commands, and MACOMs both as a professional development opportunity and to contribute some of their military medical expertise. Without this more junior level service there will not be enough experienced senior medical officers to serve in required positions in wartime.

Both the utilization strategy and training strategy have cost time and resources at the expense of direct patient care. The training strategy probably involves the equivalent of 125-150 physician years annually away from patient care, and the utilization strategy approximately 150 physician years annually. This can disrupt some patient care and, due to the demand for physician readiness training and utilization not being equal throughout the year, adjustments to patient care may be difficult and result in some patient dissatisfaction and inconvenience.

Summary of Readiness Recommendations.

1. All Medical Corps officers become proficient in the subjects taught in the USUHS Military Medicine curriculum as part of precommissioning or officer's basic course training taken in residence.

2. All career Medical Corps officers attend the AMEDD officer advanced course in residence as soon as possible after completing

specialty board certification requirements or sooner if the opportunity is presented.

3. All Medical Corps officers designated as battalion and brigade surgeons attend a two week preparatory professional development course prior to assuming their duties.

4. Increase opportunities for field grade Medical Corps officers to serve in staff planning and operations positions at Joint, DA, and MACOM level.

5. Medical corps officers be assigned to fill all TOE hospital authorizations with duty station at the installation MEDDAC/MEDCEN insofar as possible.

6. Relocate certain TOE hospitals to installations with division or brigade equivalent combat units.

7. Assigned Medical Corps officers should spend some time each quarter with their TOE hospital resulting in total field training time of approximately two weeks annually.

8. Build adjustments into the military peacetime health care system resulting from the equivalent of 300 physicians taken out of direct patient care roles as a cost of improving medical readiness.

CHAPTER III

PEACETIME HEALTH CARE ORGANIZATION

Beneficiary Population

The organization of the US Army Medical Department has evolved to its present state largely as a result of the end of the draft and the ensuing physician shortage, coupled with the increasing assumption of providing health care to larger numbers of DOD beneficiaries, particularly retirees and retiree dependents. The effect of decisions based on these factors has led to an underemphasis of the readiness mission and an overemphasis on peacetime care, with direct consequences of, for example, not assigning physicians to TOE units, not providing active duty and active duty dependents priority of care, staffing hospitals based (partially) on retired populations, and even setting specialty distribution based on peacetime needs. Perhaps the most serious outcome is an overburdened system, resourced at a level inadequate to either care for all who seek it or do those tasks necessary to prepare for war. Table 4 shows US Army beneficiary population by category.

Retirees	511,103
Dep./Retired	554,244
"Survivors"	56,732
Dep./Active	1,029,933
	2,152,012
Active Duty	817,872
Total	2,969,884

Table 4. US Army Beneficiary Population

Thus we have approximately 2,969,884 eligible US Army beneficiaries eligible for health care from Army facilities.

Physician Health Care Providers

As previously mentioned, the size of the Medical Corps is assumed to be 5317, augmented by approximately 733 physicians who are Department of the Army (DA) civilian employees. The number of 5317 is derived from both wartime and peacetime requirements, and ultimately is the Medical Corps' "fair share" of the US Army active duty endstrength cap of 781,000. The reason for having physicians on active duty at all, other than for a few planners and staff officers, is to have an adequate number immediately available for initial mobilization plus a cadre to staff station hospitals, generally in CONUS.

Active duty physicians,, therefore, should have the same degree of readiness, particularly if assigned to a TOE unit, as any other active duty officer. In peacetime, medical officers must also keep up their medical skills, because that is, in fact, what they will do in war. Peacetime patient care, then, is an important element of readiness and must not be mistaken for an activity that interferes with readiness training. If patient care is a necessary and major activity during peacetime, there must be some limit as to the amount to be done. The determinants of this amount are numbers of patients, number of providers, size of graduate medical education, and non-patient care activities. Although all of these factors can be changed, several are set by policy or external factors. The number of providers (i.e., physicians on active duty) is determined by authorized endstrength constraints and by the immediate wartime requirements set by manning documents. The 5317 physicians on active duty are made up of those

doing patient care, in GME, and in nonpatient care activities. It seems reasonable to assume that GME will continue, but decline from the near 1700 today to perhaps 1500 (an assumption), which is equivalent to 525 full-time physicians. This counts those in GME at 0.35 times their number, as recommended by the Graduate Medical Education National Advisory Committee (GMENAC). Nonpatient care activities, to include field training, career courses, etc., will increase but are difficult, if not impossible, to quantify. The 161 Medical Corps officers in staff and command positions, the 157 Medical Corps officers in research positions, and the 15 physicians in military schools, will be the only physicians counted in nonpatient care activities for this paper. Table 5 quantifies the number of physician equivalents able to provide Health care.

Medical Corps Officers	5317
Medical Corps Officers not in Patient Care Positions (Staff and Command, Research, Military Schools)	- 333
GME Adjustment (Residents and Fellows Count at 0.35 Times Their Number)	- 975
Physician Equivalents to Provide Health Care	4009

Table 5. Number of physician equivalents within an endstrength of 5317

GMENAC in 1980 projected physician supply and requirements, by specialty, through the year 1990 and, in some cases, 2000. Their figures show total requirements at 191 physicians per 100,000 patients (466,000 physicians for a population of 243,513,000 in the US). Computed at that rate, 4009 physicians, with optimal specialty distribution, can care for about 2,100,000 patients.

Since the number of beneficiaries totals just under three million, there is clearly an inadequate number of Medical Corps officers to provide full care for everyone. However, not everyone seeks or is able to get military medical care. CHAMPUS figures suggest that approximately 25% of eligible beneficiaries used that program in 1984, although probably not exclusively. Even assuming a full reduction of 25% in retirees, dependents (of retirees and active duty), and survivors, and then adding active duty, Table 6 shows that the total of 2,431,881 exceeds the number of physicians available.

Retirees, Dependents, Survivors	2,152,012
Less 25%	- 538,003
	1,614,009
Active Duty	+ 817,872
	2,421,881

Table 6. Number of beneficiaries with a 25% reduction in those eligible for CHAMPUS

But the number of 2,431,881 is unreaalistic as well, because beneficiaries of other services seek care in the Army system in greater numbers than Army beneficiaries seek care in navy or Air Force health care systems. Current estimates are that over three million total beneficiaries seek more or less full-time health care in the Army system. Even including the approximately 733 civilian physicians, the total of 4925 physicians--Medical Corps officers (full-time equivalents) and civilians--is inadequate to care for all patients who are eligible and who seek it. This, in turn, creates the perception of poor care and patient dissatisfaction as waiting times increase and care becomes hurried or impersonal. In addition, there may also be a superficial approach to care on the part of the provider. Certainly perusal of

excellence in health care and quality assurance issues demand that either physician numbers must increase or patient numbers must decrease.

Realistically, active duty strength will not increase, although some limited increase could be achieved by further decreasing GME, in addition to reducing research, command, and staff positions for Medical Corps officers. Also, civilian numbers seem unlikely to increase because of facilities limitation, cost in benefits, and the need for increases in isolated or undesirable areas where it is difficult to recruit civilians. Certainly the use of contract physicians, Health Maintenance Organizations, etc., can effectively expand provider services, but there remains a basic problem. It is, that even with contract services, more patients will seek care at military facilities than can be cared for by the number of physicians and support staff. Even if the number of patients approximates that justified by provider resources in some places, the number of retirees and their dependents seeking care penalizes not only physician readiness training, but timely care for active duty and active duty dependents.

It is the disproportionate allotment of care that is central to the issue of how to use the physicians that are available. Between the five beneficiary groups of active duty, active duty dependents, survivors, retirees, and retiree dependents, priority for full military care should go to active duty and their dependents, with limited care provided to the others. Of course nonmilitary care, from contract civilian groups, CHAMPUS, etc., can and should be made available for those not able to receive care in the military system.

If, indeed, there are insufficient numbers of physicians to care for all beneficiaries, and if trying to provide that care interferes with

the primary mission of readiness and the peacetime care of those who should have priority, some constraints must be set. The first constraint should be to limit potential health care recipients to health care resources available.

This "closed" enrollment would permit readiness training, timely peacetime care of active duty and their dependents, and help insure quality of care--actual and perceived. In addition, closed enrollment would be consistent with a family practice model of primary care. The second constraint should be to assign active duty physicians, and perhaps civilian employees, where they can best care for active duty soldiers, and their dependents, and to support GME programs.

Generally speaking, physician authorizations in TOE units should be filled, and physician resources should be concentrated in isolated areas (including OCONUS) and where there are large numbers of active duty troops and dependents. Therefore, some change within the existing medical organization seems desirable.

AMEDD Organization

The US Army Medical Department is organized into commands. Health Services Command (HSC) controls all TDA medical facilities and oversees all US Army medical care in CONUS (including Hawaii and Alaska) and Panama. HSC is a Major Army Command (MACOM), answering directly to the Chief of Staff of the Army. Seventh Medical Command (7 MEDCOM) operates all health care facilities and is responsible for all US Army health care in Europe. It is under US Seventh Army. Similarly, Eighteenth Medical Command (18 MEDCOM), under the US Eighth Army, operates all health care facilities in Korea and is responsible for all US Army health care there. Most hospitals and some clinics in Germany and Korea

are considered TDA organizations for staffing, and command and control, but are TOE organizations in reality and revert to such during mobilization. All CONUS TOE medical units come under FORSCOM. Other commands, such as Research and Development Command, or health care facilities, such as in Japan, while important, are of peripheral significance to this paper. Finally, the Office of the Surgeon General (OTSG) is a staff element of the Department of the Army and controls assignments as well as sets policy.

Such an organization as described seems adequate for overseas (Germany and Korea) since the health care provided is largely to active duty and their dependents, and facilities are located to best do this. The readiness mission is less well institutionalized but at least a structure exists for the TDA organizations to become TOE units, with the same personnel assuming their wartime role. HSC, on the other hand, has grown into a system with retirees and retiree dependents competing with active duty and their dependents for health care, as well as for other medical readiness training. Facility location, assignment distribution, and even specialty allocations (how many surgeons, internists, pediatricians, etc., there are within the 5317 endstrength) have been made, in many cases, on other than a readiness basis. Assignment distribution and specialty allocation have already been discussed. But to be able to concentrate MC officers to provide priority of care to active duty and their dependents and to participate in readiness tasks, such as training in TOE medical units, some decision must be made concerning facilities.

The following MATRIX considers major HSC hospitals and clinics, and assesses them with regard to wartime mission, number of active duty

troops supported, availability of civilian care in the area, colocation of TOE hospitals, and other missions largely GME. This will allow some basis for recommendations of terminating military care at some locations and increasing it at others. A variety of civilian alternate care options for locations where military care could be decreased or stopped will be presented later in this section.

HSC Facilities	Wartime Mission (Division, Training)	Large Troop Population	Civilian Care Available	TOE Hospital Colocated	Other Missions
Brooke	Yes	No	Yes	Yes	GME
Eisenhower	Yes	Yes	Yes	No	GME
Fitzsimmons	Yes	No	Yes	No	GME
Letterman	Yes	No	Yes	No	GME
Madigan	Yes	Yes	Yes	Yes	GME
Tripler	Yes	Yes	Yes	No	GME
William Beaumont	Yes	No	Yes	No	GME
Walter Reed	Yes	Yes	Yes	No	GME
Aberdeen	No	No	Yes	No	No
Belvoir	Yes	Yes	Yes	Yes	GME
Ben Harrison	No	No	Yes	No	No
Benning	Yes	Yes	Yes	Yes	GME
Bragg	Yes	Yes	Yes	Yes	GME
Campbell	Yes	Yes	Yes	Yes	No
Carlisle	No	No	Yes	No	No
Carson	Yes	Yes	Yes	No	NO
Devens	Yes	No	Yes	Yes	No
Dix	Yes	Yes	Yes	No	No
Drum	Yes	Yes	Yes	No	No
Eustis	No	No	Yes	No	No
Hamilton	No	No	Yes	No	No
Hood	Yes	Yes	No	Yes	GME
Huachuca	Yes	No	No	No	No
Irwin	Yes	No	No	No	No
Jackson	Yes	Yes	Yes	No	No
Knox	Yes	Yes	Yes	Yes	No
Leavenworth	No	No	Yes	No	No
Lee	No	NO	Yes	Yes	No
Leonard Wood	Yes	Yes	No	Yes	No
McClellan	Yes	No	No	No	No
McPherson	No	No	Yes	No	No
Meade	Yes	No	Yes	Yes	No
Monmouth	No	No	Yes	No	No
Monroe	No	No	Yes	No	No
Myer	No	NO	Yes	No	No
Ord	Yes	Yes	Yes	Yes	GME
Polk	Yes	Yes	No	No	NO
Redstone	No	No	Yes	No	NO
Riley	Yes	Yes	Yes	Yes	No
Rucker	Yes	Yes	No	No	GME
Sheridan	No	No	Yes	No	No
Sill	Yes	Yes	Yes	Yes	No
Stewart	Yes	Yes	No	No	No
West Point	No	No	Yes	No	No
White Sands	No	No	NO	No	No

Based on the above, several health care facilities, with few wartime missions, little active duty/dependent populations to support, and ample civilian care available, could be closed or staffed entirely by civilian contract care. Other facilities, because of their missions, etc., clearly should be expanded, and additional active duty physicians should be assigned to FORSCOM TOE units as well as colocated TDA hospitals. The Medical Centers (BAMC, DDEMC, FAMC, LAMC, MAMC, TAMC, WRAMC, WBMAC), while often not directly supporting troops, play a large role in graduate medical education and, partially because of their locations, are able to expand greatly and deal with large numbers of returning casualties. Therefore, any recommendations should be on the basis of factors other than those considered here. Also, some military representation may be politically desirable at locations where numbers and mission alone might not support it. Those considerations will be left to others. Table 7, then, is a list of locations where, on the basis of the above criteria, care could be entirely civilian:

Facilities	Authorized Medical Corps Officer Positions
Aberdeen	8
Ben Harrison	12
Carlisle	6
Eustis	26
Hamilton	5
Leavenworth	30
Lee	29
McPherson	6
Monmouth	18
Monroe	5
Myer	7
Redstone	20
Sheridan	5

Table 7. Locations where military health care might be terminated.

If these recommendations were to be followed, at least 1 TOE hospital at Fort Lee would have to be moved. The approximately 177

military physicians available from authorized positions at the above hospitals and clinics then could be added to staffs of TOE hospitals, other TOE units (perhaps with duty at the TDA hospital), or could increase staffing elsewhere. Given approximately 1500 MC officers in GME, plus 1000 in teaching, there could be 650 allocated for Europe, 100 for Korea, and over 2000 MC officers available for MEDDAC or TOE assignments in CONUS.

Alternative Health Care Programs

Alternative methods of providing care to DOD beneficiaries other than active duty soldiers will now be considered. In developing such alternative programs there must first be a clear understanding of what it is we are trying to achieve. Basically we are seeking to develop the Medical Corps' "combat readiness" by creating a force structure whose size and composition will enable it to fulfill its primary mission of preserving the fighting strength of the Army. All other missions must be considered secondary to this primary task. Given this guidance in planning alternatives, different plans are offered for providing health care to the dependents of active duty soldiers, retirees and their beneficiaries. In all of these plans it is understood that the active duty soldier will, in almost all cases, receive his or her care in a military treatment facility (MTF).

It appears quite evident that, in order to provide comprehensive health care to all DA beneficiaries, significant changes will be needed in the system that is now in force. To be able to evaluate the best way in which to change the present system various health care delivery models have to be devised and then analyzed to determine their strengths and weaknesses. It is beyond the scope of this paper, however, to

develop models and carry out studies to determine cost effectiveness. We will attempt, therefore, to provide alternative solutions and speculate as to the feasibility of each one.

In the search for alternative health care systems there needs to be some estimate of the demand for the services that will be provided. Basically there are two ways to do this: (1) estimate the projected need using health status data of the population served and then, using medical opinions, translate the data into required health services. (2) accept that demand is an exogenously determined variable, using historical data on utilization of health services as a basis for measuring it.

Both of these methods are extremely poor ways of calculating future needs but one will have to be used to forecast the resources needed in any proposed new system. It is recognized that decision making in the field of health care planning in the United States must be made under conditions of extreme uncertainty. For purposes of this study we will consider a total beneficiary population of approximately 2,969,884 (see Table 4).

As alternatives are developed, four criteria must be kept in mind: First, the primary mission of the Medical Corps is readiness, second, the health care system must provide both inpatient as well as outpatient care to all beneficiaries, third, there must be a suitable mix of patients in our medical centers in order to maintain graduate medical education programs, and forth, the proper mix of patients is important in the community hospitals we operate because the staff must be able to keep their skills current. The following are the major alternative health care programs to be considered:

1. Comprehensive Health Care Plan for Dependents and Retirees Utilizing Civilian Contractors. This system, already outlined by the Department of Defense, would provide easy access to free primary health care by all eligible beneficiaries, except active duty soldiers. Under this plan, most basic medical care would be provided through a system of civilian contractor operated clinics. Cases too complex for these primary care clinics would be referred to military facilities or civilian hospitals. This system would supplant CHAMPUS, and contractors would receive a fixed payment annually to provide care to all those eligible. The contractors would be large health care or insurance companies, who might also elect to provide additional benefits such as dental care, etc. for an additional fee, to be paid by the patient.

Since this plan would offer free care to all beneficiaries it is very attractive from the patients' point of view. It would probably induce a large number of retirees and dependents who do not presently utilize CHAMPUS to return to the Federal system of health care.

2. Expanded CHAMPUS Program with Restricted Enrollment at AMEDD Facilities. As a result of a restructuring of the Medical Corps as proposed previously, it is evident that thee would be a reduction in the number of dependents/retirees receiving care in AMEDD medical treatment facilities (MTF). Of course, active duty members and their dependents would receive top priority. Those unable to enroll in the MTF could be treated, under CHAMPUS or a similar system, by civilian practitioners. It would be feasible in some cases to hire contract physicians to work in the MTF while in others, the patients may need to be seen in civilian facilities. This system has been in effect at Air Force hospitals since

1976 under a test program called Joint Health Benefit Program. Department of Defense approved the program for all military services in 1986. Under this arrangement retirees and their dependents pay $50 per person deductible each year and 25% of the costs of an office visit. Expanded CHAMPUS benefits might include such things as catastrophic coverage for extensive injuries such as burns, or neurological injuries as well as special coverage for non-injury disorders that are associated with extremely large hospital charges. In this regard allowance might be made for the infant who requires weeks in a neonatal intensive care unit where the charges often exceed $300 per day, as well as a few other such catastrophic medical conditions.

3. Health Maintenance Organizations and Preferred Provider Organization Contracts (HMO/PPO Contracts). These types of plans are much like alternative number one except for the fact that the beneficiary might be required to pay an annual fee for treatment that is provided by the HMO or PPO. The patient would have no choice in selecting the care provider in this system unless he elected to pay any expense over and above that charged the government by the HMO for similar treatment. In this type of arrangement the Government would pay the major portion of the annual fee to the HMO. Both outpatient and inpatient care would be covered by the contract.

4. Government Sponsored Health Insurance Plans. Much like the plans now being offered by many companies, the Defense Department could offer health insurance policies to military beneficiaries. Several types of policies could be provided with the patient free to choose the one which best meets his needs. Above a certain dollar figure the patient would be responsible for a percentage of the bill; or perhaps

the more familiar deductible sort of policy would be issued. Catastrophic coverage clauses could be included to cover such items as neonatal intensive care admissions, severe head injuries, etc. Because of the savings that the Defense Department could accrue by contracting with a preferred provider group, the patient would not have complete freedom of choice in selecting his health care provider.

There are problems associated with all of these alternatives, apart from the cost off providing health care. For instance, in most parts of the US there would be no problem in the beneficiaries obtaining their care form civilian sources, however, in some isolated areas this would not be true. Any proposed option must take into account such remote and medically poorly served areas where our Armed Forces are stationed.

Discussion of Alternatives

1. Comprehensive Health Care Plan. As mentioned above, this plan would be popular with our beneficiaries since total health care is provided free of charge without the struggle that is often associated with using CHAMPUS. Due to the enormous cost of such a plan it is doubtful this sort of arrangement could achieve Congressional approval, particularly in the current economic climate. It is currently estimated that DOD spends $12 billion annually on health for eligible beneficiaries. Of course, CHAMPUS does not take advantage of the expertise and competition that currently exists in the civilian medical community, hence it is likely that this figure could be substantially reduced. On the other hand, it is just as likely that many beneficiaries who do not use CHAMPUS at the present time would switch from their private insurance coverage to a totally free program thus driving up the costs significantly. A DOD survey done in 1984 showed

that only 37% of retirees were covered solely by CHAMPUS. Twenty-eight percent purchased their own insurance and 35% had an employee health plan.

If such a comprehensive program were approved without monetary constraints of where the patient could obtain care and there were no deductibles, then DOD would, in our estimation, be promoting the very type of care that has brought the health care system of America to its present critical condition. Both government and private industry have been guilty of creating the wrong incentives. When companies agreed to benefit plans that provided 100% coverage for nearly all health care, they gave their employees incentives to demand health care services without concern for efficiency or costs. In the absence of normal cost constraints, physician demands have led to excessive duplication in the use of services and equipment. Government and private employers must change their health plans so that employees/beneficiaries become more concerned about price. For these reasons we do not recommend such a plan.

2. Expanded CHAMPUS Program With Restricted enrollment A. AMEDD Facilities. Part of the problem with the current health care system is the fact that the AMEDD has attempted to continue to provide comprehensive care to a growing number of beneficiaries despite a reduction in health care providers. The resultant delays in obtaining appointments, the long waits in clinics, the often impersonal care, all can be attributed to a policy that seeks to do more with less. In order to avoid perpetuating this unsatisfactory system it is necessary to change the way we now provide care. As the Army Surgeon General, LTG Quinn Becker has said, "...we will no more try to do more with less."

Limiting enrollment in MTF's would allow those patients who are served by that facility more prompt and personalized care. Unfortunately this system will not be popular among those who want to receive care but are unable to do so at their local Army hospital. One has only to review the recent situation that resulted at Eisenhower Army Medical Center when the Commander tried to close the family practice program to retirees and provide the service in other ways. His action caused such an outcry among the group that the Georgia congressional delegation became involved. Nevertheless, such a plan is feasible. Under this option the patient would still be required to fund a portion of his care when he used CHAMPUS which will lead some to call it unfair since those who were accepted into the MTF treatment program would receive free care.

3. HMO/PPO Contracts and Government Sponsored Health Insurance. These alternatives can be discussed together since both will involve the government paying the major portion of the individuals health care bill. The patient would however, be required to fund a portion of his care, either as a deductible or as a portion over and above what the government has agreed to pay. In addition, patients would be constrained in the choice of their health care providers from among a particular group or hospital that has entered into a contractual agreement with the government. This is probably the most likely plan for most of corporate America in the coming decade. Obviously it would be unpopular with our beneficiaries but as discussed below, this is the right time to begin to institute major structural changes in the way DOD provides health care.

As previously noted, this project cannot purport to be an in depth study/analysis of the probable costs of each of the various alternatives mentioned above. We can, however, point out some pertinent points to be considered in such a system cost analysis.

1-End Product Orientation. What are the resources necessary to achieve total coverage of the dependents/retirees in the civilian and/or the military sector? We have provided estimates as to the money and number of physicians necessary to care for the Army's share of this population. No attempt has been made to estimate the number of nursing personnel and ancillary health care providers that would need to be added to the AMEDD in order to assume comprehensive care of the total retiree, dependent and active duty populations.

2-Extended Time Horizon. Program costs need to be projected out to at least 5 years, (although we cannot know at what rate medical costs will increase in the future). We do know that the population served is growing older, hence costs may grow disproportionately--in any given year 70% of Medicare's money goes for 9% of those covered.

3-Incremental Costing. This term refers to the net difference between a program's total cost and the cost of an alternative program. Such differences could determine the method by which DA enters into agreements with civilian health care contractors. For instance, it may well be that it would be more cost effective for DA to contract with hospitals in each state at locally established prices rather than attempt a nation-wide contract(s) with one or more large health care provider organizations.

4-Resource Measures. When trying to calculate resources needed we can use money as one measure but we must also ascertain if DA can readily purchase the professional services needed in various areas. The extent to which the availability of personnel acts as a constraint to the feasibility of the alternatives must be explicitly addressed.

Military medicine finds itself caught in a maelstrom of conflicting issues, pressures and directives. The budget cuts, the demand for wartime readiness, the outcry over alleged malpractice incidents and a burgeoning elderly population that is eligible for care, all tug and pull the AMEDD in different and often opposite directions.

If possible it would be far better to try and solve the many problems and tasks the Medical Corps faces without resorting to Draconian measures. However, it would also be unwise to refuse to consider all options and possible solutions to the problems we face. One of the more severe solutions involves a decision, on the part of government, as to the necessity of providing health benefits to retirees and their dependents. According to the health benefits act, active duty soldiers are guaranteed free health care in MTF's or, if that is not possible, in civilian facilities. The same law states that all others who are eligible for care may receive it only if space, time and personnel are available. Thus, one approach would be to stop providing health care altogether to all but active duty and their dependents. For the reasons noted elsewhere in this paper this is not considered a viable solution.

If the DA is unable to raise the endstrength of the Army in the near future--as appears certain, and if Gramm-Rudman-Hollings legislation is found to be constitutional, then it is almost equally certain that

retirees and their dependents and possibly dependents of active duty soldiers will have to share more of their own health care costs.

This idea of cost sharing by the beneficiary is quite intriguing. Studies have shown that the more responsible individuals are for their health care costs, the less they buy. In one study it was shown that companies could save about 7% on health care costs merely by instituting a $50 deductible. In the past, the federal government has viewed health care as a social problem but today it views it almost solely as a budget deficit problem. This shift in perspective applies to military medicine as well as civilian. Today the diagnostic related groups, (DRG), system used by Medicare, is the wave of the future. The idea of paying a fixed fee to care providers will be extended to the private sector as well as the federal sector. As Thurow states:

> ...the long run aim, (of the government health care policies), is to return the system to the point at which a large fraction of health care costs again comes directly out of the individuals pocket. The goal is to make the patient the main cost container.

Naturally, any attempt to require military retirees/dependents pay a portion of non-CHAMPUS medical bills will meet with vocal opposition.

In light of the foregoing it seems that it would be premature to make a recommendation as to the type of alternative health care program that should be instituted to take care of our retirees and dependents. As mentioned, the Defense Department spends $12 billion annually to pay for health care for all military personnel, retired, active duty and all dependents. Until studies can be performed that will allow us to make true cost comparisons of comparable civilian care systems, no specific alternative plan can be offered. It does seem very likely, however, that whatever future plans are offered the provider will be given a

fixed fee to take care of a group of potential patients regardless of their individual diagnoses. The long term goal in any civilian program that would provide care to our beneficiaries will most likely involve making the patient shoulder a portion of the cost of care The main thrust of any such alternative will be to make the patient, (dependent/retiree), the main cost container.

Conclusions:

1. There are too few active duty physicians and DA civilian physicians to care for all DOD beneficiaries.

2. Attempting to provide military health care for all beneficiaries who seek it interferes with some aspects of readiness, both for health care providers and for active duty health care recipients.

3. Non-military health care options can be made available to those unable to get military health care.

Recommendations:

1. Limit patient population to resources available, by facility, on a beneficiary category basis and on an area basis, with priority to active duty and active duty dependents.

2. Fill MC TOE slots, with duty in some cases at the TDA hospital.

3. Close some CONUS TDA medical facilities and reassign the MC officers to Europe, Korea, TOE units, and hospitals with larger active duty populations and/or in isolated areas.

4. Move TOE hospitals to large troops posts.

5. Investigate alternative, nonmilitary health care options for locations and populations who will be without military care.

CHAPTER IV

OVERALL CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. The US Army Medical Department has evolved into a system largely devoted to providing peacetime health care to all categories of DOD beneficiaries.

2. The authorized endstrength of the Medical Corps is too small to provide peacetime health care to all beneficiaries and also too small to meet wartime mobilization requirements (COMPO I), particularly in the surgical specialties.

3. Readiness training, other than providing health care to patients in peacetime, is inadequate.

4. Readiness of the Army Medical Corps is a function of many factors including (1) number of physicians, (2) specialty mix, (3) availability, (4) military proficiency, and (5) medical proficiency.

5. The Medical Corps must operate under the concept that medical care will be continuous from the FLOT to medical facilities in CONUS.

6. In order to satisfy the MOBPERSACS requirement for 2039 TOE physicians in the correct specialty mix, alternatives need to be investigated. These would include (1) substitutability, (2) deletion of selected specialties, (3) early deployment of physicians in training, and (4) possible elimination of residency programs.

7. US Army Graduate Medical Education is vital to the maintenance of an adequate supply of specialists.

8. Surgical specialty training cannot be increased. Thus, the deletion of nonsurgical training would not provide more positions for surgical training, but would provide more staff positions.

9. A large source of health care professional manpower for wartime is found in the Veterans Administration. They are not obligated to perform any military service.

10. Some medical treatment facilities are unnecessary to wartime missions and their operation could be carried out more efficiently (cost and people) if they were run on a civilian contract basis.

11. Alternative health care programs for DA beneficiaries are urgently needed if the Medical Corps is to increase its readiness posture but still remain at 5317. These alternatives include (1) a comprehensive health care plan for dependents and retirees; (2) expand CHAMPUS; (3) HMO/PPO contracts; and (4) government sponsored health insurance plans.

Recommendations

1. Medical Corps officers must become highly proficient in all aspects of military medicine. This would include, among others, attendance at the officer's basic and advanced course and the Combat Casualty Care course. Further, Medical Corps officers would attend preparatory professional development courses prior to assuming duties as battalion and brigade surgeons, and division surgeons would attend a CBR course.

2. More opportunities need to be developed for physicians serving in staff planning in the Office of the Surgeon General, health care operations, JCS, unified commands and MACOMS.

3. Close specific medical treatment facilities (MTFs), particularly those located near large urban areas where health care is readily available. The personnel assets from these closed facilities could then be redistributed to other MTFs. See Table 7.

4. Relocate certain TOE hospitals to installations with division or brigade combat units.

5. Medical Corps officers should be assigned to fill all TOE hospital authorizations. First priority for filling these positions should be from the peacetime staff positions of the same SSI. These Medical Corps officers may then be assigned duties at a MEDDAC or MEDCEN.

6. Substituting a physician of one specialty for one of a similar specialty, although not accepted in peacetime "quality assurance" settings, has been done in previous conflicts and could again prove to be extremely beneficial to the AMEDD and combat soldier.

7. Place more physicians, including HPSP, ROTC and USUHS graduates into an active duty deferral plan so that GME can be accomplished in a civilian institution. Following their training, these physicians should enter active duty or be placed in the Reserves as the need exists.

8. Keep Army GME. The AMEDD GME programs are vital for maintaining a continual source of professional health care providers. Additionally, the present GME programs provide for a means of continuing health education and professional growth.

9. Consideration should be given to closing one entire medical center to allow for additional fully trained staff physicians within the Medical Corps endstrength.

10. Require all graduates of VA GME programs to serve in the active reserve or as an IRR or IMA.

11. Limit the recipients of health care in Army medical treatment facilities to more closely match the health care resources available, and allow more time for readiness training (closed enrollment).

12. Selectively expand the use of existing alternative health care programs, i.e., CHAMPUS, contracting, to reduce the burden on critically short resources, to allow for readiness training.

13. Development of alternative health care for DOD beneficiaries is urgently needed but more specific cost analysis studies need to be done prior to recommending implementation of any comprehensive alternative health care program.

In summary, the constraints and demands on the US Army Medical Corps, and indeed, the entire AMEDD, have caused impairments to readiness. Realistic solutions can be found, however by recognizing and dealing with the missions, the limitations, and the resources available. This paper by no means does all of that, but it is an attempt to continue the process of definition and proprosal that will ultimately lead to an even more effective and vital medical corps and AMEDD.

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LIST OF MEDICAL SPECIALITIES

SSI	Speciality
60A	Operational Medicine
60B	Nuclear Medicine
60C	Preventive Medicine
60D	Occupational Medicine
60E	General Medicine
60F	Pulmonary Medicine
60G	Gastro
60H	Cardiology
60J	OB/GYN
60K	Urology
60L	Dermatology
60M	Allergy/IMM
60N	Anesthesiology
60P	Pediatrias
60Q	Ped Cardiology
60R	Child Neurology
60S	Opthalmology
60T	Otolaryngology
60U	Child Psychiatry
60V	Neurology
60W	Psychiatry
60Z	Hematology/Oncology
61A	Nephrology
61C	Endocrinology
61D	Rheumatology
61E	Clinical Pharmacy
61F	Internal Medicine
61G	Infectious Disease
61H	Family Practice
61J	General Surgery
61K	Thoracic Surgery
61L	Plastic Surgery
61M	Orthopedic Surgery
61N	Aviation Medicine
61P	Physical Medicine
61Q	Therapeutic Radiology
61R	Diagnostic Radiology
61T	Anatomic Pathology
61U	Pathology
61V	Clinical Pathology
61W	P. Vsc Surgery
61Z	Neurosurgery
62A	Emergency Medicine

Enclosure 1

MOBPERSACS
COMPO 1
June 1985

SSI	TOE	TDA	TOTAL
60A	237	180	417
60B	0	42	42
60C	48	104	152
60D	0	15	15
60E	366	1,070	1,436
60F	0	121	121
60G	7	112	119
60H	7	172	179
60J	28	145	173
60K	15	152	167
60L	8	121	129
60M	0	86	86
60N	62	257	319
60P	0	11	11
60Q	0	1	1
60R	0	11	11
60S	16	156	172
60T	16	159	175
60U	0	11	11
60V	7	119	126
60W	50	335	385
60Z	0	23	23
61A	0	44	44
61B	0	6	6
61C	0	36	36
61D	0	2	2
61E	0	6	6
61F	174	980	1,154
61G	0	45	45
61H	9	49	58
61J	374	692	1,066
61K	33	88	121
61L	2	61	63
61M	120	673	793
61N	109	84	193
61P	0	56	56
61Q	0	1	1
61R	41	329	370
61T	0	10	10
61U	14	293	307
61V	0	6	6
61W	0	22	22
61Z	26	76	102
62A	270	173	443

Enclosure 2

SSI	MOBPERSACS TOE	MOBPERSACS TDA	MOBPERSACS TOTAL	CURRENT STAFF AUTHORIZATIONS	RESIDENTS	FIRST YEAR GRADUATE MEDICAL EDUCATION (FYGME)	OUT OF CONUS
60A	237	108	417	163	0		43
60B	0	42	42	28	6		2
60C	48	109	152	65	12		9
60D	0	15	15	9	6		1
60E	366	1,070	1,436	407	0	290	126
60F	0	121	121	37	15		3
60G	7	112	119	45	14		3
60H	7	172	179	74	23		7
60J	28	145	173	214	92		49
50K	15	152	167	64	29		9
60L	8	121	129	72	29		11
60M	0	86	86	36	14		2
60N	62	257	319	101	55		15
60P	0	11	11	279	83		52
60Q	0	1	1	9	3		0
60R	0	11	11	11	4		1
60S	16	156	172	81	36		10
60T	16	159	175	60	43		11
60U	0	11	11	44	8		8
60V	7	119	126	49	23		5
60W	50	335	385	174	56		31
60Z	0	29	29	43	21		2
61A	0	44	44	22	6		2
61C	0	36	36	28	3		2
61D	0	2	2	18	2		2
61E	0	6	6	4	0		0
61F	174	980	1,154	259	160		42
61G	0	45	45	25	8		0
61H	9	49	58	298	105		57
61J	374	692	1,066	192	109		33
61K	33	88	121	27	6		5
61L	2	61	63	21	7		3
61M	120	673	793	156	104		28
61N	109	84	193	126	12		36
61P	0	56	56	25	7		1
61Q	0	1	1	15	7		0
61R	41	329	370	155	89		22
61T	0	10	10	0	0		0
61U	14	293	307	167	53		24
61V	0	6	6	0	0		0
61W	0	22	22	12	2		0
61Z	26	76	102	23	16		2
62A	270	173	443	86	40		3
Total (43)	2,039	7,135	,174	,719	1,308	290	663

Enclosure 3

SSI	CURRENT STAFF VS TOE REQUIREMENTS OVER	CURRENT STAFF VS TOE REQUIREMENTS SHORT	CURRENT STAFF VS TOTAL REQUIREMENTS OVER	CURRENT STAFF VS TOTAL REQUIREMENTS SHORT
60A	N	74		254
60B	N			14
60C	17			87
60D	N			6
60E	41			1,029
60F	N			84
60G	38			74
60H	67			105
60J	186		41	0
60K	49			103
60L	64			57
60M	N			50
60N	39			218
60P	N		263	
60Q	N		8	
60R	N		0	0
60S	65			91
60T	44			95
60U	N		33	
60V	42			77
60W	124			211
60Z	N			14
61A	N			22
61C				8
61D	N		16	
61E	N			2
61F	85			895
61G	N			20
61H	289		240	
61J		184		874
61K		6		94
61L	19			42
61K	39			637
61N	17			67
61P	N			31
61Q	N		14	
61R	114			215
61T	N			10
61U	153			140
61V	N			6
61W	12			10
61Z		3		79
62A		184		357

N = No MOBPERSACS TOE Requirement

Enclosure 4

APPENDIX A.

PRINCIPAL RECOMMENDATIONS

The Panel, as a result of its deliberations, has identified the six recommendations listed below as being of primary importance. The Panel strongly recommends that the Secretary of Defense direct their incorporation into the facility sizing process, and that the Assistant Secretary of Defense (Health Affairs) be the Secretary's principal agent in implementing that incorporation and directing that process.

I. Medical readiness requirements should be the primary criterion for determining the size and composition of the peacetime active duty medical force and of the facilities in the direct-care system. Additions should be made to that force and those facilities: (i) where they cannot provide beneficiaries adequate access to health care overseas or at other locations which are remote from alternative sources for health care; (ii) when valid teaching or training requirements (as defined on pages 16-17) would be met; or (iii) when the cost of providing peacetime care in the direct-care system would be lower than the cost of other alternatives.

II. To permit more realistic and rigorous analyses of the appropriate sizes of specific facilities, current estimates of wartime requirements should be further refined and the management information systems now under development should be completed and implemented without delay. An integrated analytic force sizing methodology based on those requirements and information systems should be adopted for sizing and staffing all DoD medical treatment facilities. These steps must be completed in time for their use in review of the FY 1987 budget and in development of the FY 1988 budget -- certainly no later than January, 1986.

III. The review of DoD medical treatment facilities and the selection of candidates for funding as medical military construction projects should be consolidated and streamlined, so that all facilities are reviewed by the Office of the Assistant Secretary of Defense (Health Affairs), which will be responsible for selecting those most urgently needing replacement, modification, or modernization, taking into account the recommendations of the Services, and for allocating resources to those projects.

IV. The interval between the final determination of the appropriate size for a medical facility and the construction of that facility is currently too long, resulting in facility construction based on outdated analysis. A final review of facility requirements should precede initiation of construction by no more than two years.

V. Firm guidelines should be developed to ensure that, when (i) it is consistent with the readiness mission (as described in Recommendation I above) and (ii) it is cost effective to do so, the Military Health Services System will make use of civilian or other governmental (e.g., Veterans Administration) capacity to provide care to its beneficiaries. Economic analyses of medical military construction should include documentation of consultation with and record the opinions of state and community-based, system-wide local civilian health planning groups or associations, or, where they do not exist, of local facilities.

VI. The Military Health Services System must adopt workload measurements and other resource allocation mechanisms that reward the cost-effective provision of quality care and that eliminate incentives for overutilization of services.

In addition to the six recommendations above, the Panel has also concluded that the following steps should be taken regarding Brooke Army Medical Center (BAMC) at Fort Sam Houston, Texas, and Madigan Army Medical Center (MAMC) at Tacoma, Washington.

Design and construction of BAMC have not yet been initiated, and the analyses supporting the currently planned facility are outdated. The Panel recommends that the requirements for BAMC be reviewed by the Assistant Secretary of Defense (Health Affairs) and a final decision be provided to the Secretary within a year. A further explanation of the rationale for this recommendation is included in the discussion of BAMC on pages 16-18.

Construction of MAMC has proceeded to the point where redesign of a smaller facility would not be a cost-effective alternative to continuation of current plans. While recognizing that the facility may be oversized by about 100 beds relative to currently predictable needs, the Panel recommends that the 478-bed facility be constructed as planned. A further explanation of the rationale for this recommendation is included in the discussion of MAMC on pages 19-20.

SUPPORTING FINDINGS AND RECOMMENDATIONS

These supporting findings and recommendations amplify and expand on the concerns addressed in the principal recommendations.

I. Medical Readiness

The readiness of the peacetime Military Health Services System depends on two inseparable activities: first, the maintenance of an active-duty medical force of sufficient size and appropriate skill mix to meet wartime requirements during the interval between the decision to mobilize the reserve components and the time reservists would become available; and, second, the maintenance and operation of those medical facilities required to (i) support the peacetime missions, morale, and welfare of the operating forces, (ii) fully employ the readiness medical force, (iii) provide necessary training to that force, and (iv) conduct readiness-related medical research.

Although the primary mission of the MHSS is to maintain medical readiness, existing laws and directives include no provisions recognizing the readiness mission as a quantitative criterion for sizing DoD medical treatment facilities. Until 1982, the Services were directed to size their hospitals for the care of active-duty personnel and their dependents, and they were permitted to add an additional five percent of that capacity in non-teaching hospitals and ten percent in teaching hospitals for the care of other beneficiaries. PL 97-337 of 1982 amended that principle to permit the construction of additional capacity to provide in-house care where it is cost-effective to do so. These directives, which focus on the means of satisfying the peacetime demand for health services, do not provide a mechanism for implementing the Defense Guidance, which emphasizes the primacy of the readiness mission. To place the appropriate emphasis on the primary mission of the MHSS, laws and directives must be amended to require that the medical readiness mission of any proposed DoD medical treatment facility be quantitatively defined in that facility's justification. In that calculus, the

readiness mission must be understood to include not only direct contributions to mobilization and wartime support but also support of the peacetime readiness, morale, and welfare of the operating forces and of training requirements for medical readiness. If no specific readiness mission can be identified, the facility must be justified solely on economic grounds*.

To permit the sizing of DoD medical treatment facilities to meet readiness requirements, the first priority of medical planning must be to identify the size and composition of the peacetime medical force required to support mobilization. This requirement is already recognized in the Defense Guidance, which directs that:

"In programming medical manpower, the Services will allocate to the active component only:

-- The manpower required in wartime before RC (Reserve Component) assets would become available; and

-- Additional manpower which be clearly shown to ensure the most cost-effective provision of health services to beneficiaries."

To satisfy the Defense Guidance, the Services must assume the burden of proof that their requests for medical manpower authorizations meet these criteria.

Current estimates of medical readiness manpower requirements could not be applied as criteria for sizing DoD peacetime medical treatment facilities; although progress has been made in standardizing the methods used for predicting wartime medical requirements, wide disparities persist among the Services' estimates of requirements for medical facilities and manpower. In addition, shortages of manpower in critical specialties may constrain the wartime operations of hospitals in the United States. To ensure that DoD planning will adequately support wartime medical needs, predictions of wartime medical requirements must be refined so that they can be used as criteria for sizing facilities.

* See page 22 for additional comments received from Dr. Stuart Altman.

The Panel believes that the supply of physicians in the civil sector in coming years will be large enough to permit recruitment of the numbers required (in addition to those that will be supplied by the continuation of the Armed Forces Health Professions Scholarship Program) to sustain the size of the peacetime active-duty force, although the Services may continue to experience difficulty in recruiting surgeons and manpower in certain other critical specialties. The difficulties the military medical departments experienced in the 1970s in meeting their recruiting goals have diminished as the national supply of physicians has increased. Although the current restrictions on residencies in the surgical specialties are likely to hinder the Services' recruitment efforts in particular specialties, it appears that the recruitable supply of non-surgical specialists will be adequate to meet the Services' needs for the foreseeable future. To achieve the potential economies offered by this situation, the Services' in-house training programs should be sized on a specialty-specific basis, and residency and other GME programs must be justified by readiness requirements, by the need to maintain an appropriate GME mix to support training that is justified by readiness requirements, or on the basis that they provide trained medical manpower which (i) could not be effectively recruited from or trained in the civilian sector, and (ii) will provide care in the direct-care system at a lower cost than could be achieved in the civilian sector. In addition, the Department of Defense should explore the possibility of establishing long-term contracts with civilian institutions for Graduate Medical Education for specified numbers of military physicians in surgery and other critical specialties*.

Efficiencies may be achievable by coordinating planning for Graduate Medical Education (GME) and by consolidating programs. The Services' GME programs play a key role in maintaining the size and qualifications of the military physician force. The methods used to determine GME requirements vary among the Services, however, and the Services seem to develop programs to meet their estimated requirements independently, without exploring the possibilities of joint training. Joint training is clearly possible, as is evidenced by the performance of the Uniformed Services University of the Health Sciences, and is most feasible in locations where

*See page 12 for additional comments received from Dr. Stuart Altman.

there is more than one DoD medical treatment facility. In addition, the Services, in sizing their requests for billets under the Armed Forces Health Professions Scholarship Program, appear to give priority to keeping their GME billets filled without regularly factoring in an assessment of which GME billets can be justified by the medical readiness mission, which are essential to support other programs which can be so justified, and which are cost-effective. It is unclear whether the redundancy in the Services' GME programs is essential to the separate missions of the Services; until this question is resolved, it will remain difficult to assess the proper quantitative impact of statements of GME requirements on the criteria for sizing DoD medical treatment facilities.*

In the past, decisions to build, modernize, or replace facilities have not automatically ensured that adequate manpower would become available to operate the facilities at their intended capacities. Two factors jointly determine the operating capability of a medical treatment facility: the physical capacity of the facility and the manpower available to staff it. In the DoD Planning, Programming, and Budgeting System, decisions regarding medical manpower authorizations are made several years after the initial decision to program a medical construction project, and they sometimes fail to provide the manpower implicitly required to operate the planned facility. For example, although the Air Force received funding in 1976 to modernize Wilford Hall Medical Center in San Antonio as a 1000-bed facility at a cost of more than $95 million on the basis of its belief that it would be able to staff and operate the facility at its full capacity, current limits on manpower authorizations are such that the hospital is constrained today to operating well below its constructed capacity because of a shortage of support personnel. To ensure realistic sizing of DoD medical treatment facilities, medical manpower planning and authorizations for medical manpower end-strength must be directly tied to facility planning. As the experience at Wilford Hall demonstrates, physician manpower is not the only limiting resource; to ensure the effective operation of DoD medical treatment facilities, authorizations for all categories of manpower should be linked to facility planning.

* See page 22 for additional comments received from Dr. Stuart Altman.

APPENDIX B

Table I. Military Medicine I.

Course Subjects:
The Medical Officer's Commitment
Military Medicine — Occupational Medicine
Geneva Convention/Law of War
Disaster Relief
Infectious Disease
Combat Surgery
Combat Psychiatry
Medical Combat Support • NBC Environment • Urban Terrain • Special Operations
Physiological Response to Environmental Stress • Undersea • Ionizing Radiation • Biological Rhythms • Outerspace • Spatial Disorientation/Motion Sickness • Thermal Stress

Table III. Military Medicine II.

Subjects Include:
Air Evacuation in Disaster or Combat
Being in Charge
Echelons of Care
Your First Operational Assignment
Intermediate Cardiac Life Support
Legal Issues
Medical Intelligence Gathering
Medical Support • Planning • Logistics • Teamwork
Military Medical Research

Table IV. Military Contingency Medicine Subjects.

Advanced Cardiac Life Support
Advanced Trauma Life Support
Basic Life Support
Common Soldier Tasks
Disaster Planning and Management
Law of War
Leadership
Mass Casualty Care
Medical, Surgical and Dental Emergencies
Operational Medicine; Planning and Management
Pre-hospital (Paramedic Skills)

Table II. Military Medical Field Studies (MMFS).

Subjects Covered:		
FTX	Specialty Training	Unit Assignments
BAS/Medevac	Air Assault	ARTEP, FTX
Chemical Defense	Airborne	IG/CG Prep
Clearing Company	EFMB	Maintenance
Night Ops	Jumpmaster	NCO Relations
Platoon Leadership	Pathfinder	Organization
Resupply	Scuba	Project Officer
Tactical Demands	Search, Evasion, Resistance, Escape	Troop Clinic

END

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